

CHAPTER 4 ALTERNATIVE CORRIDOR IDENTIFICATION

4.1 INTRODUCTION

Sensitivity mapping was prepared in GIS for each environmental resource category (also see Exhibits 1 through 7). To identify alternative corridors, a composite sensitivity map was created that combined all resource sensitivity levels (see Exhibits 8). This composite map was overlaid with existing utility corridors, and the areas of lowest sensitivity identified. These areas represented wide corridors where routing alternatives could later be developed. Some corridors were wide enough to allow for multiple routing options within them.

Corridors were identified for each of the voltage options being considered for the project. Each voltage option required different origin and destination points. A total of four potential electrical configuration options were considered as part of the project:

1. A 500 kV transmission line originating at a new Townsend or Ringling area substation in Montana and connecting to the Borah Substation in the Pleasant Valley west of Pocatello, Idaho; or
2. A 500 kV DC transmission line originating at a new Townsend or Ringling area substation in Montana and connecting to the existing Midpoint Substation located north of Twin Falls, Idaho; or
3. A 345 kV transmission line originating at the new Townsend or Ringling area substation in Montana and connecting to the Borah Substation in the Pleasant Valley west of Pocatello, Idaho, or
4. A 230 kV transmission line originating at the existing Mill Creek Substation located south of Anaconda and terminating at the existing Borah Substation.

The corridors identified tended to follow existing utility corridors and the lower foothills in less rugged terrain of the mountains away from high concentrations of agricultural and residential development. The corridors identified vary from about 1 mile to almost 20 miles in width (see Exhibit 10).

This section describes the general location and configuration of each corridor.

4.2 MONTANA

Opportunities for transmission line routing were identified along 18 primary corridors in Montana as described below.

Corridor MT-1: Between the proposed Ringling Substation area and the proposed Townsend Substation area along the existing Colstrip 500 kV transmission line corridor;

Corridor MT-2: From the proposed Ringling Substation area generally paralleling S89 on the west side bearing south and connecting to the existing 230 kV transmission line corridor traversing the Gallatin Forest between Three Rivers and Wilsall, and crossing Flathead Pass in the Bridger Range to the Three Rivers area (Ringling to Three Rivers South);

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Corridor MT-3: From the proposed Ringling Substation area following the existing Colstrip 500 kV transmission line to the west and bearing southwest between the Bridger Range and Elkhorn Range to the southeast and Sixmile Mountain to the northwest connecting to the existing 230 kV transmission line corridor between Three Rivers and Wasill;

Corridor MT-4: Paralleling the Missouri River and S287 on the west between Townsend and Three Rivers and generally following the existing 115 kV transmission line;

Corridor MT-5: Between the existing 500 kV Colstrip transmission line west of Townsend and occupying the Boulder Valley west of Bull Mountain and Boulder Mountain to the Whitehall area;

Corridor MT-6: Running north and south between Three Forks and Ennis Lake west of the Madison River and east of the Tobacco Root Mountains in a wide corridor generally paralleling S287;

Corridor MT-7: West and northwest of the Jefferson Valley between Whitehall and Twin Bridges;

Corridor MT-8: Between the existing Anaconda Substation (Mill Creek) and Melrose following the existing 161 kV and 230 kV transmission line corridors west of I-15 and I-90;

Corridor MT-9: Running east and west between Melrose and Twin Bridges generally north of Burina Road and west of the Jefferson River Valley;

Corridor MT-10: Generally following the existing 161 kV transmission line between Ennis Substation, Sheridan Substation and the city of Dillon between the Tobacco Root Mountains and the Ruby Mountains, and southeast of the Beaverhead River;

Corridor MT-11: Northwest of the Beaverhead River between Twin Bridges and north of Dillon;

Corridor MT-12: Between Melrose and Dillon and following the existing 230 kV and 161 kV transmission lines west of I-15;

Corridor MT-13: Between Dillon and the Centennial Valley generally following Blacktail Road between Blacktail Mountains WSA and Blacktail WMA ending northwest of Lima Reservoir;

Corridor MT-14: Located along the Madison River Valley generally east of S287, turning west south of the Missouri Flats and paralleling the Centennial Valley on its north side;

Corridor MT-15: Between the existing 161 kV corridor northeast of Clark Canyon Reservoir and the existing 230 kV corridor northwest of Clack Canyon Reservoir running parallel and south of Juniper Spring Gulch and Grasshopper Creek;

Corridor MT-16: Following the existing 230 kV transmission line from Dillon into Idaho along the Medicine Lodge Creek Valley between the Continental Divide and the Hidden Pasture Creek WSA;

Corridor MT-17: Following the existing 161 kV transmission line between Dillon and Monida Pass generally along the I-15 corridor; and

Corridor MT-18: Between the west end of the Centennial Valley and Lima Reservoir towards Monida Pass.

4.3 IDAHO

Corridors were identified for each of the voltage options being considered for the project. Each Opportunities for transmission line routing were identified along 8 primary corridors in Idaho as described below.

Corridor ID-1: Following the existing 161 kV corridor between Monida Pass and the existing Jefferson Substation;

Corridor ID-2: Following the existing 230 kV transmission line from the Continental Divide into the Snake River Valley and Idaho National Laboratory;

Corridor ID-3: Connecting the existing 161 kV transmission line and the existing 230 kV transmission line corridor from the Jefferson Substation southwest between the Hell's Half Acre WSA and the Cedar Butte WSA;

Corridor ID-4: Following the existing 161 kV transmission line corridor from the Jefferson Substation south and diverging southwest at the I-15 intersection and generally following S39 on the north south of the Hell's Half Acre WSA and the Cedar Butte WSA;

Corridor ID-5: Beginning northwest of the Idaho National Laboratory and bearing generally southwest paralleling S22 and US20/26/93 on its north side in the foothills of the Pioneer and White Knob Mountains, and tuning more in a southerly direction into the Snake River Plain to the Midpoint Substation;

Corridor ID-6: Between the Antelope Substation and north of Pleasant Valley along the existing 230 kV transmission line;

Corridor ID-7: Between the north side of Pleasant Valley and Borah Substation along the existing 230 kV transmission line; and

Corridor ID-8: Along the existing 345 kV transmission lines located between Borah Substation and Midpoint Substation directly south of the Craters of the Moon National Monument and Shale Butte WSA.